From:	Matthew Starr
To:	BOCrfc2015
Subject:	TechAmerica Comments Re: RFC on Ways to Expand and Promote Broadband Deployment
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Attachments:	DB666C86-1613-4344-930A-EA5263306A42[243].png NTIA Broadband Deployment Comments Final.pdf

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Comments of TechAmerica are attached. Please let me know if you have any questions.

Sincerely,

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June 10, 2015

National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Ave., NW
Washington, DC 20230
Attn: Broadband Opportunity Council

Re: NTIA Request for Comment on Broadband Deployment, Adoption and Competition

TechAmerica, the public sector and public policy division of The Computing Technology Industry Association ("CompTIA") hereby submits these comments in response to the NTIA's RFC on how federal agencies can promote broadband deployment, adoption and competition. Our members represent the full spectrum of the information technology and communications industry. They are at the forefront of innovation and provide a critical backbone that supports broader commerce and job creation. These members include major IT enterprise companies, small and medium sized IT solution providers, and the distribution partners that bring these products and services to market.

The Internet is at the heart of today's global economy, but many Americans still don't have access to "broadband" Internet under the FCC's new definition of 25 Mbps up and 3 Mbps down, and *most* Americans don't have a choice of broadband providers.[1] We commend the Administration for recognizing this problem and creating the Broadband Opportunity Council[2] ("BOC") to help solve it. This is an issue that will require immense coordination not only between various executive departments and agencies, but also between federal, state and local governments.

Deploying broadband infrastructure is a massive undertaking, one that requires significant up-front investment that companies may not recoup for decades. And yet, deployment is made even more difficult by regulatory barriers at every step of the

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[1] *In re* Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, GN Docket No. 14-126 (rel. January 29, 2015), *available at:* https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-10A1.pdf.

[2] Presidential Memorandum, *Expanding Broadband Deployment and Adoption by Addressing Regulatory Barriers and Encouraging Investment and Training*, (March 23, 2015), https://www.whitehouse.gov/the-press-office/2015/03/23/presidential-memorandum-expanding-broadband-deployment-and-adoption-addr.

process. These barriers to deployment keep companies from investing more into infrastructure, and potentially keep new entrants from entering the market. Competition is the key to better broadband access, and to increase competition, government should be *en*couraging private investment, not discouraging it.

Removing regulatory barriers is only part of the solution, however. Wireless broadband use has skyrocketed in recent years, and demand for wireless data is expected to continue to grow exponentially in the near future.[3] Wireless speeds are increasing too, and in some rural areas, it may be a better long-term solution to broadband access than wireline broadband. However, there simply isn't enough available spectrum to meet this coming demand, even as unlicensed spectrum begins to carry more and more of the wireless traffic.

The federal government is currently sitting on a large amount of spectrum suitable for both licensed and unlicensed wireless use without any incentive to use it efficiently or make it available for private use.[4] If companies could rely on the federal government to make more spectrum available, they would be more likely to invest in networks to capitalize on it. More available spectrum means more capacity and higher speeds for wireless broadband. Finding new ways to put government spectrum in the hands of the private sector could do incredible things for wireless broadband access.

If the BOC can help encourage the implementation of initiatives to remove barriers to deployment and increase spectrum availability, it will go a long way towards increasing and improving broadband access nationwide.

Barriers to Broadband Deployment

Some of the biggest barriers to deployment occur not at the federal level, but at the state and local government levels. Getting access to utility poles and rights of way at reasonable costs has proven problematic in many cities and states, and approval timelines are often unpredictable.[5] But the federal government (most notably the FCC) has made significant strides in fixing some of these issues, and there is much more that the federal government and the BOC can do to solve problems at the local level.

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[3] Cisco, *Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update 2014-2019*, at 3 (Feb. 3, 2015) ("Cisco Mobile Data Forecast") http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white_paper_c11-520862.pdf.

[4] *Connecting America: The National Broadband Plan,* at 82 (2010) ("National Broadband Plan") *available at*: https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf.

[5] Berin Szoka, Matthew Starr, & Jon Henke, *Don't Blame Big Cable. It's Local Governments That Choke Broadband Competition,* Wired (July 16, 2013), http://www.wired.com/2013/07/we-need-to-stop-focusing-on-just-cable-companies-and-blame-local-government-for-dismal-broadband-competition/.

In 2011, the FCC passed the Pole Attachment Order,[6] which standardized rates and timelines for pole attachment for telecommunications providers in the 30 states where they have authority to do so. The FCC's recent Open Internet Order[7] (should it stand up in court), potentially broadens the reach of the pole attachment rules, applying them to non-traditional telecommunications providers now deploying fiber (such as Google). This should also benefit new companies looking to follow the Google Fiber model of deploying a broadband connection without the traditional cable or phone service component of the service.

The FCC issued two other notable rulings lowering barriers to wireless deployment. The first, in 2009, was a declaratory judgment establishing timeframes for local governments to respond to applications to build wireless facilities.[8] The decision was ultimately challenged by several local governments and eventually was upheld by the Supreme Court in FCC v. City of Arlington.[9] The second, passed just last year, eased a number of rules for deployment of small cells.[10]

All three of these FCC decisions made massive strides in lowering barriers to broadband deployment, but there is ample work to be done to remove additional barriers to deployment at the state and local levels. While the BOC has limited authority to control what state and local governments are doing, there is a role for it in this process. In particular, there are two things the BOC should do: 1) it should collect and aggregate information about existing state and local infrastructure so that a company looking to deploy broadband anywhere in the country can find the necessary information in one centralized database; and 2) issue a set of model practices that state and local governments should follow to encourage broadband deployment.

According to several of our member companies, information about local infrastructure is often hard to find, incomplete and inconsistent from city-to-city and state-to-state. This lack of information on existing infrastructure makes it difficult for companies deploying broadband to know how best to build their

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[6] *In re* Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting, WC Docket No. 11-59 (rel. April 7, 2011), *available at* https://apps.fcc.gov/edocs_public/attachmatch/FCC-11-51A1.pdf.

[7] *In re* Protecting and Promoting the Open Internet, GN Docket No. 14-28 (rel. Feb. 26, 2015), https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-24A1.pdf.

[8] *In re* Petition for Declaratory Ruling to Clarify Provisions of Section 332(2)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance, WT Docket No. 08-165 (rel. Nov. 18, 2009), *available at* http://apps.fcc.gov/ecfs/document/view;jsessionid=pXySPQYJT9bd0KtkTVWsLv0v0Q1mJFScdh9zbyV1Hkp1VZFmhhQ1!-321460796!1471562840?id=7020393456.

[9] City of Arlington v. FCC, 133 S. Ct. 1863 (2013).

[10] *In re* Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, WT Docket No. 13-238 (rel. Oct. 21, 2014), *available at* https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-153A1.pdf.

networks, and slows down the deployment process. If companies were able to find all of this information in one central database, it would save time and lower costs. To build this database, the BOC should work with state and local governments to collect the necessary information, and make it available for anyone looking to deploy broadband infrastructure.

Another consistent theme we heard from our members was that the inconsistency of regulations across cities and states made deployment difficult and unpredictable from one state to another and even in cities within the same state. For example, some cities and states make it more difficult than others to secure access to local infrastructure, pole attachments, and rights of way. Similarly, timelines for approval vary wildly across the states, and some states require approvals at both the state and local level, further slowing the process. Harmonizing these processes across the states would remove a massive barrier to broadband deployment, and thus the BOC should issue a set of best practices for states to follow. While it's certainly possible that some states have purposeful reasons for their practices, others simply may not know the best ways to encourage broadband deployment. Educating those state and local officials about how to improve broadband access in their areas, and perhaps drafting model legislation, should be a primary focus of the BOC.

Access to Federal Spectrum

Demand for wireless data continues to grow annually by leaps and bounds. Mobile data traffic in the U.S. grew 120% in 2013,[11] and 69% worldwide in 2014.[12] And yet, of the 7.4 billion mobile devices in use last year, only 29% of were smartphones, and they accounted for 69% of mobile data traffic.[13] Additionally data usage per smartphone grew 45% in 2014.[14] As smartphones become more ubiquitous mobile data traffic will increase immensely in the coming years. In fact, Cisco projects that mobile data usage will increase nearly sevenfold in the U.S. by 2019 (from 0.56 exabytes/month in 2014 to 3.82 exabytes/month).[15]

To meet this ever-growing demand for data, companies need wireless spectrum sufficient to carry the traffic. Already we are seeing wireless providers offloading roughly two-thirds of their traffic from licensed to unlicensed networks to meet these demands,[16] and even that likely won't be enough in the long term. Some companies are even experimenting with networks made up primarily of unlicensed spectrum, which will create even more traffic in the current bands set aside for unlicensed use.

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[11] Cisco Mobile Data Forecast at 4.
[12] *Id.* at 1.
[13] *Id.* at 2.
[14] *Id.*
[15] *Id*. at 36.
[16] Phil Goldstein, *Cisco: N. American Mobile Users to Each Consume Around 11 GB per Month by 2019,* Fierce Wireless (Feb. 3, 2015), http://www.fiercewireless.com/story/cisco-n-american-mobile-users-each-consume-around-11-gb-month-2019/2015-02-03.

Despite this massive demand for spectrum, there is only one major spectrum auction on the horizon, the Broadcast Television Incentive Auction, scheduled for 2016.[17] While that auction could make between 84-120 additional MHz of spectrum available,[18] it marks the last known source of sub-3 GHz spectrum for commercial use for the foreseeable future. On the unlicensed side, the FCC recently opened up the lower portion of the 5 GHz band for unlicensed use, and is continuing to explore other pieces of that band.[19] They've also begun to test out new models for spectrum use in the 3.5 GHz proceeding. Even with all of those FCC proceedings moving forward, more sources of spectrum are still needed.

The federal government remains, by far, the largest holder of spectrum suitable for wireless use,[20] and it is widely acknowledged that they are not efficient users of their spectrum.[21] Under current law, federal agencies can be reimbursed for the cost of clearing and reallocating spectrum for auction.[22] However, clearing spectrum for auction is a costly, time-consuming process, and the 2012 PCAST report found that "clearing and reallocation of Federal spectrum is not a sustainable basis for spectrum policy due to the high cost, lengthy time to implement and disruption to the Federal mission."[23]

While the recent AWS-3 auction, which brought in over $44 billion,[24] showed that spectrum auctions can indeed result in significant revenue for the government, the

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[17] FCC, *A Groundbreaking Event for the Broadcast Television, Mobile Wireless, and Technology Sectors of the U.S. Economy,* http://wireless.fcc.gov/incentiveauctions/learn-program/.

[18] John Eggerton, *FCC Gets Spectrum of Reaction on Incentive Auction Vote,* Broadcasting & Cable (Dec. 12, 2014), http://www.broadcastingcable.com/news/washington/fcc-gets-spectrum-reaction-incentive-auction-vote/136340.

[19] *In re* Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band, ET Docket No. 13-49 (rel. March 31, 2014), *available at:* https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-30A1.pdf.

[20] "The total percentage of the most highly valued spectrum [between 225 and 3700 MHz] exclusively or predominantly used by the federal government ranges from approximately 39 percent to 57 percent." United States Government Accountability Office, *Report to Congressional Committees: Spectrum Management Incentives, Opportunities and Testing Needed to Enhance Spectrum Sharing* at 6-7 (Nov. 2012), http://www.gao.gov/assets/660/650019.pdf.

[21] "Many spectrum licensees, however, have inflexible licenses that limit the spectrum to specific uses. These licensees do not incur opportunity costs for use of their spectrum; therefore, they are not apt to receive market signals about new uses with potentially higher value than current uses. The result can be inadequate consideration of alternative uses, artificial constraints on spectrum supply and a generally inefficient allocation of spectrum resources." National Broadband Plan at 82.

[22] *See* Commercial Spectrum Enhancement Act, Pub. L. No. 108-494, Title II, 118 Stat. 3986, 3991 (2004); Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156 (2012).

[23] PCAST, *Report to the President: Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth,* at 10 (July 2012), *available at* https://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_spectrum_report_final_july_20_2012.pdf.

[24] Peter Cramton & Pacharasut Sujarittanonta, *Bidding and Prices in the AWS-3 Auction* (May 2015), http://apps.fcc.gov/ecfs/document/view?id=60001048120.

problem of incentivizing agencies to part with their spectrum remains. Simply reimbursing an agency for the costs of the arduous task of clearing and reallocating spectrum is not enough motivation to make its spectrum available for commercial use. Instead, some sort of real financial incentive must be offered. In addition, agencies should receive financial incentives not just for re-allocating spectrum for commercial use, but also for sharing their spectrum. Given the findings of the PCAST Report, sharing, not reallocating, will be the likely future of spectrum policy. There simply are no incentives in place currently to promote this approach.

The 2013 Presidential Memorandum "Expanding America's Leadership in Wireless Innovation"[25] identified the potential for sharing of federal spectrum and directed NTIA to develop a plan "directing applicable agencies to provide quantitative assessments of the actual usage of spectrum," in bands suitable for sharing. NTIA issued said plan in its "Fourth Interim Progress Report," which identified 960 MHz of spectrum for potential repurposing, and required agencies to identify when and where they were using those frequencies by June 5, 2015.[26] At this point in the process, we hope that all agencies abided by that deadline, so that NTIA can finally create a broad summary of federal spectrum usage. This long-awaited summary will finally provide a clear picture of opportunities for commercial usage of federal spectrum.

Once opportunities for commercial use of federal spectrum are known, the agencies in possession of that spectrum must have some incentive to part with it or share it. The White House acknowledged this in its 2013 Memorandum,[27] and the Spectrum Policy Team issued a report in early 2014 outlining a number of approaches to providing incentives to federal agencies.[28] However, the report only laid out the pros and cons of various approaches, and made no direct recommendations. It ultimately led to an RFI asking for stakeholder input, but we have seen nothing further since the March 2014 comment deadline.

Whatever approach the Government ultimately takes to incentivizing agencies to make their spectrum available for commercial use, it should abide by the following principles: 1) the approach should be flexible, allowing for selling, sharing, leasing, etc. depending upon the best approach given the spectrum at issue; 2) it should allow agencies to not only recoup costs, but provide actual financial incentives to

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[25] Presidential Memorandum, *Expanding America's Leadership in Wireless Innovation* (June 14, 2013), ("2013 Presidential Wireless Memorandum") https://www.whitehouse.gov/the-press-office/2013/06/14/presidential-memorandum-expanding-americas-leadership-wireless-innovatio.
[26] National Telecommunications and Information Administration, *Fourth Interim Progress Report on the Ten-Year Plan and Timetable and Plan for Quantitative Assessments of Spectrum Usage,* at 15-16 & Appendix A (June 2014), *available at* http://www.ntia.doc.gov/files/ntia/publications/fourth_interim_progress_report_final.pdf.
[27] 2013 Presidential Wireless Memorandum.
[28] Institute for Defense Analyses Science & Technology Policy Institute, *A Review of Approaches to Sharing or Relinquishing Agency-Assigned Spectrum* (Jan. 2014), https://www.ida.org/upload/stpi/pdfs/p5102final.pdf.

make their spectrum available; and 3) it should include a market-based pricing mechanism, where agencies would receive more money for relinquishing spectrum in high-demand frequencies than they would, say, for sharing spectrum in lower-demand frequencies. Such an approach would almost certainly require legislation to, among other things, allow agencies to receive money from the Spectrum Relocation Fund for non-auctioned spectrum.

The White House has done an admirable job thus far of leading the charge towards more available spectrum over the last 5 years from their initial Memorandum in 2010[29] to the creation of the BOC this year, but they may have gone as far as they can alone. Once NTIA completes their assessment of federal spectrum, it may fall to Congress to create new incentives for agencies to make their spectrum available, and for the agencies to take advantage of these incentives and work with NTIA to bring them to fruition. This process will take widespread coordination and hard work across the entire federal government, but it is essential to the future of the tech industry and the growth of the U.S. economy.

Other Federal Initiatives

There are several other ways the Federal Government can increase private investment into broadband infrastructure such as a permanent extension of the 50% bonus depreciation that has historically been renewed annually, and adopting and encouraging dig-once practices.

An additional 50% bonus depreciation allows for companies to more quickly receive tax benefits for investment in property such as broadband infrastructure. Bonus depreciation reduces the risk of long-term investments because it accelerates payment recovery time and thus lowers the average cost of capital for long-term assets. A permanent extension would thus provide companies with more certainty about their ability to recover costs on investments like broadband infrastructure, which can take decades to recoup. More certainty would incent companies to make these types of major investments. The BOC should thus recommend that the bonus depreciation is extended permanently.

A "dig-once" policy refers to, on a general level, coordination between government agencies that provides opportunities for broadband infrastructure deployment when roads are being excavated for other reasons. These policies help lower costs for broadband deployment and minimize disruption time. They also show an increased government emphasis on the importance of broadband infrastructure deployment. On the Federal level, we would encourage the Department of Transportation's Federal Highway Administration to adopt a dig-once policy for

[29] Presidential Memorandum, *Unleashing the Wireless Broadband Revolution* (June 28, 2010), http://www.whitehouse.gov/the-press-office/presidential-memorandum-unleashing-wireless-broadband-revolution.

federal highways. As for the state and local levels, we would encourage the BOC to draft a model dig-once policy for states to adopt and ideally draft into law.

Conclusion

The creation of the BOC alone is an excellent step towards acknowledging that changes are necessary to increase deployment of broadband infrastructure, but the BOC now needs to keep the ball rolling. Finding ways to make more federal spectrum available for commercial use, creating a database of broadband infrastructure, issuing model state regulations, encouraging a permanent extension of the bonus depreciation, and advocating for dig-once policies are just a few of the many steps the BOC can take to improve broadband deployment across the country. The future of the U.S. economy depends on improving broadband access nationwide, and it might not really be that hard to get us there.